Operating Strategy for Four-Week S-332D Test

BASIC PHILOSOPHY

For the first 2 week period the quantity of water pumped at S-332D will be determined by the amount of water needed to raise and maintain desirable water levels in L-31W based on rainfall delivery methodology. In a similar manner, the quantity pumped at S-332D in the 3rd week will be determined by the L-31W overbank flow requirements with the caveat that the pump station should be driven at full capactiy for at least 24 hours in order to test the full range of probable operating conditions. The 4th week will be used to return to normal.

Due to expected variability in weather conditions, it will be necessary to use S-176 and S-331 in addition to S-332D to control water levels in L-31N within acceptable ranges. Water will be supplied at S-331 using the South Dade Conveyance system when water levels are lower than desired. Water will be removed at S-176 when water levels are higher than desired. It is not envisioned that S-331 and S-176 would be used at the same time.

Should storm events or unusal circumstances develop, the test will be suspended or terminated and all possible means be used to return conditions to normal as soon as possible. An example of such events would be the approach of Tropical Storms within a 3 day time frame. Unusually high ground water levels east of L-31N (like stages above 6.0 at the Humble or Duclose well) may also be cause to suspend the test.

Localized storms in the area may also cause suspension of the test. These will be judged by the ability of the installed facilities to maintain control of water levels in L-31N. If water levels in L-31N rise above 5.0 all inflows at S-331 will terminate, S-176 will be opened as required. If this is inadequate to bring water levels down to 5.0 S-332D will be utilized up to full capacity if necessary. If S-332D and S-176 are not adequate to keep water levels from rising above 5.0, S-175 and S-332 will be used to restore normal conditions as soon as possible.

SPECIFIC CRITERIA

- Maintain, to the degree possible, average water level in L-31N between S-331 and S-332D at 5.0 with S-176 closed. The average water level will be defined as the mean of S-331 Tail and S-176 Head.
- Pump S-332D to maintain target stages in L-31W (based on 1930-40 target level computed for that week or of the water level computed for average weekly rainfall by that method) during the first and second week. Water levels will be transitioned smoothly over 2-4 days to those targets depending on how high those targets are above levels experienced immediately prior to the test.
- If the computed L-31W target stage is low and precludes S-332D pumping for the first two weeks, use the projected target of 5.34 for Week 1 and 5.43 for Week 2.
- During the 1st week pump S-332D to match the L-31W target stage. Pump when the upstream stage equals or exceeds 5.0 and stop when the stage falls below 4.8.
- During the 2nd week pump S-332D to match the L-31W target stage and maintain average water level of 5.0 at L-31N.
- During the 3rd week pump S-332D to produce overbank flows over substantial portions of L-31W. It is anticipated that water levels somewhat above 6.0 will be required.
- A minimum of one 24 hour period in week 3 will be at full S-332D capacity regardless of downstream water level – provided adequate water can be supplied at S-331 to supplement local inflow and maintain average water level of 5.0 in L-31N.
- The fourth week will be used to transition back to L-31W water levels which allow S-174 to be used in a manner consistent will Test7 phase 1 criteria.
- S-331 and the South Dade Conveyance System will be used to make up the water delivered at S-332D and to maintain the average water level in L-31N between S-332D and S-331 at 5.0. Water in L-30, L-29, or WCA3A may be used for this purpose.
- If unable to maintain an average of 5.0 in L-31N due to local inflow and seepage with the combination of S-332D/S-174 and S-176, pump S-332 and open S-175 to facilitate return to normal non-test operations in L-31N and L-31W as soon as possible.